

**REMARKS**

Claims 1-23 and 40-79 are currently pending in the subject application and are presently under consideration. Claims 1, 2, 6, 7, 10, 12, 18-23, 40, 41, and 54-64 have been amended as shown on pages 2-14 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claim 23, 40-53, and 64-79 Under 35 U.S.C. § 101**

Claims 23, 40-53, and 64-79 stands rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Withdrawal of this rejection is requested in view of the amendments herein to independent claims 23, 40, 41, and 64.

**II. Rejection of Claims 1-7, 10, 12-23, 40, 41, 46-64, 69-72, 76, 78, and 79 Under 35 U.S.C. § 102(e)**

Claims 1-7, 10, 12-23, 40, 41, 46-64, 69-72, 76, 78, and 79 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Chung *et al.* (U.S. Pat. No. 6,741,862) (hereinafter "Chung *et al.*"). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Chung *et al.* does not disclose each element as set forth in the subject claims.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The claimed subject matter relates to combining grant, acknowledgement and rate control channels in a wireless communications environment. In an aspect, a first signal can indicate an acknowledgement of a decoded subpacket and whether a rate control command is generated, and a second signal can conditionally indicate the rate control command when one is generated. In another aspect, a grant can be generated concurrently with the acknowledgement. In still another aspect, a mobile station can monitor the first signal and conditionally monitor the second signal

as indicated by the first signal, and can monitor a third signal comprising the grant. The claimed subject matter can thereby provide flexibility of grant-based control while utilizing lower overhead when rate control commands are utilized.

In particular, independent claim 1 recites: . . . *a message generator for: generating a first message comprising an acknowledgement indicator and a rate control indicator, wherein the rate control indicator indicates at least whether a rate control command will be generated and issued; and generating a second message conditioned on the rate control indicator indicating at least that the rate control command will be generated and issued.* Chung *et al.* fails to disclose this distinctive aspect of the claimed subject matter.

Rather, Chung *et al.* discloses a base station controls a reverse data rate of a mobile device based in estimated amount of interference the mobile device is causing to other sectors. (See col. 4, lns. 1-4.) Chung *et al.* discloses that the estimated amount of interference is based on a forward-link SIR for the mobile device, where the forward-link SIR is averaged over a period of time. (See col. 4, lns. 4-8.)

However, unlike the claimed subject matter, Chung *et al.* fails to disclose a first message that contains a rate control indicator that indicates whether a rate control command will be generated and issued in a second message. Chung *et al.* also fails to disclose conditionally generating a second message, where the second message is generated *conditioned on* the rate control indicator of the first message indicating that the rate control command will be generated and issued.

Instead, Chung *et al.* discloses that a mobile station measures its forward link SIR, calculates DRC using the SIR value, and sends the DRC value and current queue size to the base station. (See col. 11, lns. 35-38.) Chung *et al.* further discloses that the base station calculates the desired reverse-link rate for the mobile station that depends on the DRC value and calculates the next reverse-link rate for the mobile station according to the calculated desired reverse-link rate and the current queue size of the mobile station. (See col. 11, lns. 38-42.) Chung *et al.* discloses that the base station sends the rate to the mobile station, and the mobile station transmits data using the indicated rate. (See col. 11, lns. 42-44.) Thus, Chung *et al.* simply discloses that it calculates a reversed-link rate based on a received DRC value and queue size of the mobile station and transmits the rate to the mobile station so the mobile station transmits at that rate. The DRC value is *not* a rate control indicator that indicates whether a rate control

command will be generated and issued. Further, the DRC is not contained in a first message to indicate whether a rate control command will be generated and issued in a subsequent message.

In contrast, the claimed subject matter can *generate* and transmit *a first message comprising* an acknowledgement indicator and *a rate control indicator*. The acknowledgement indicator indicates whether a received subpacket was decoded successfully, and *the rate control indicator indicates whether a rate control command will be generated and issued*, and thus can indicate whether a second message comprising a rate control command will be generated and issued to the mobile station. In another aspect, the claimed subject matter can *generate* and transmit *a second message conditioned on the rate control indicator*, received in the first message, *indicating that the rate control command will be generated and issued* in the second message. The claimed subject matter, by combining the acknowledgement indicator with the rate control indicator in a message, can facilitate managing and reducing overhead, increasing system utilization, increasing capacity, and increasing throughput.

Independent claim 6 recites: . . . *a message generator for: generating a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement (NAK), and one or more of the values indicating at least whether a rate control command is to be issued; and conditionally generating a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands, wherein the generating the second signal is conditioned on the value of the first signal indicating at least that the rate control command is to be issued*. For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not this distinctive aspect of the claimed subject matter as recited in independent claim 6. Chung *et al.* fails to disclose *conditionally generating a second signal* based on a value contained in the first signal indicating whether a rate control command is to be issued.

Independent claim 10 recites: . . . *a receiver for receiving a first signal comprising a rate control indicator and conditionally receiving a second signal in accordance with the rate control indicator when the rate control indicator indicates that a rate control command will be issued; and a message decoder for decoding the rate control indicator from the received first signal*. For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* fails to disclose this distinctive aspect of the claimed subject matter as recited in independent claim 10. Chung *et al.* does not disclose receiving a second signal conditioned on a

rate control indicator in a received first signal indicating that the rate control command will be issued in the second signal.

Conversely, the claimed subject matter can receive a first message (e.g., the first message can be received by a mobile station) and the rate control indicator received in the first message can indicate whether to expect to receive a second message containing a rate control command. If the received rate control indicator indicates that a rate control command is going to be generated and issued, the receiver of the message (e.g., the mobile station) can know to expect a second message containing the rate control command; and if the rate control indicator indicates that no rate control command is going to be generated and issued, the receiver of the message can know not to expect a second message containing a rate control command.

Independent claim 19 recites: . . . *a message generator for: generating a first message comprising an acknowledgement indicator and a rate control indicator, wherein the rate control indicator indicates at least whether a rate control command will be transmitted; and conditionally generating a second message, wherein the generating the second message is conditioned on the rate control indicator indicating that the rate control command will be transmitted.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* fails to disclose generating a first message that contains a rate control indicator to indicate whether a rate control command will be transmitted. Chung *et al.* also fails to disclose generating a second message conditioned on the rate control indicator of the first message indicating the rate control command will be transmitted.

Independent claim 20 recites: . . . *a receiver for receiving a first signal comprising a rate control indicator and conditionally receiving a second signal in accordance with the rate control indicator, wherein the receiving the second signal is conditioned on the rate control indicator indicating that a rate control command will be transmitted to the remote station . . . .* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, Chung *et al.* does not disclose receiving a second signal conditioned on a rate control indicator in a received first signal indicating that the rate control command will be transmitted to the remote station in the second signal.

Independent claim 21 recites: . . . *a message generator for: generating a first message comprising an acknowledgement indicator and a rate control indicator, wherein the rate control indicator indicates at least whether a rate control command will be generated; and*

*conditionally generating a second message, wherein the generating the second message is conditioned on the rate control indicator indicating that the rate control command will be generated.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* fails to disclose this distinctive feature of the claimed subject matter as recited in independent claim 21. Chung *et al.* does not disclose generating a first message that contains a rate control indicator to indicate whether a rate control command will be generated. Chung *et al.* also fails to disclose generating a second message conditioned on the rate control indicator of the first message indicating the rate control command will be generated.

Independent claim 22 recites: . . . *a receiver for receiving a first signal comprising a rate control indicator and conditionally receiving a second signal in accordance with the rate control indicator, wherein the receiving the second signal is conditioned on the rate control indicator indicating that a rate control command will be issued . . . .* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, Chung *et al.* does not disclose receiving a first signal that includes a rate control indicator that indicates whether a rate control command will be issued, and a second signal *conditioned on* the rate control indicator received in a first signal indicating that the rate control command will be issued in the second signal.

Independent claim 23 recites: . . . *generating a first signal comprising one of a first plurality of values, . . . one or more of the values indicating at least whether a rate control command will be generated and issued; and conditionally generating a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands, the generating the second signal conditioned on the value of the first signal indicating the rate control command will be generated and issued.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* fails to disclose this distinctive aspect of the claimed subject matter as recited in independent claim 23. Chung *et al.* fails to disclose generating a first signal that contains a value indicating whether a rate control command will be generated and issued. Chung *et al.* also fails to disclose generating a second signal *conditioned on* the received value of the first signal indicating the rate control command will be generated and issued.

Independent claim 40 recites: . . . *receiving a first signal comprising one of a first plurality of values, . . . one or more of the values indicating at least whether a rate control*

*command is to be issued; and conditionally receiving a second signal comprising one of a plurality of rate control commands, wherein the receiving the second signal is conditioned on the value of the first received signal indicating the rate control command is to be issued.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, Chung *et al.* does not disclose receiving a first signal that includes a value that indicates whether a rate control command will be issued, and a second signal *conditioned on* the received value received in a first signal indicating that the rate control command will be issued in the second signal.

Independent claim 41 recites: . . . *receiving a first signal indicating whether the transmitted packet was acknowledged and whether a rate control command will be issued; and receiving a second signal comprising the rate control command when the rate control command is issued, wherein the receiving the second signal is conditioned on the first signal indicating the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, the cited art does not disclose receiving a second signal *conditioned on* the first signal indicating that the rate control command will be issued in the second signal.

Independent claim 54 recites: . . . *means for generating a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement NAK), and one or more values indicating at least whether a rate control command will be issued; and means for conditionally generating a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands when the value of the first signal indicates the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not disclose generating a value(s) that indicates if a rate control command is to be issued, and generating a second signal, conditionally, based on the value of the first signal indicating the rate control command will be issued.

Independent claim 55 recites: . . . *means for generating a first signal indicating whether the received packet was decoded correctly and indicating whether a rate control command will be issued; and means for generating a second signal comprising the rate control command when the first signal indicates the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, the cited art fails to disclose this distinctive feature of the claimed subject matter as recited in independent claim 55. The cited art

does not disclose generating a first signal indicating whether a rate control command will be issued. The cited art also fails to disclose generating a second signal based on the condition that the first signal indicating the rate control command will be issued.

Independent claim 56 recites: . . . *means for transmitting a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement (NAK), and one or more of the values indicating whether a rate control command will be transmitted; and means for transmitting a second signal comprising the rate control command, wherein the transmitting the second signal is conditioned on the first signal indicating the rate control command will be transmitted.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not disclose transmitting a first signal containing a value(s) that indicates whether a rate control command will be transmitted as part of a second signal. Chung *et al.* also fails to disclose generating a second signal conditioned on the first signal indicating the rate control command will be transmitted.

Independent claim 57 recites: . . . *means for receiving a first signal indicating whether the transmitted packet was acknowledged and whether a rate control command will be issued; and means for receiving a second signal comprising the rate control command when the first signal indicates the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, the cited art fails to disclose this distinctive aspect of the claimed subject matter as recited in independent claim 57. The cited art does not disclose receiving a second signal if the first signal indicates that a rate control command will be issued in the second signal.

Independent claim 58 recites: . . . *means for generating a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or a negative acknowledgement (NAK), and one or more of the values indicating at least whether a rate control command is to be issued; and means for conditionally generating a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands when the value of the first signal indicates the rate control command is to be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not disclose generating a first signal that includes a value(s) indicating whether a rate control command will be issued. Chung *et al.* also fails to disclose generating a second signal on the condition that the value in the first signal indicates the rate control command will

be issued in the second signal.

Independent claim 59 recites: . . . *means for receiving a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement (NAK), and one or more of the values indicating at least whether a rate control command is to be issued; and means for conditionally receiving a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands when the value of the first received signal indicates the rate control command is to be issued.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, Chung *et al.* fails to disclose this distinctive feature of the claimed subject matter as recited in independent claim 59. Chung *et al.* fails to disclose receiving a second signal on the condition that the value received in the first signal indicates the rate control command will be issued subsequently.

Independent claim 60 recites: . . . *generating a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement (NAK), and one or more of the values indicating at least whether a rate control command will be generated and transmitted; and conditionally generating a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands, wherein the generating the second signal is conditioned on the value of the first signal indicates a indicating the rate control command will be generated and transmitted.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not disclose transmitting a first signal containing a value(s) that indicates whether a rate control command will be generated and transmitted in a second signal. Chung *et al.* also fails to disclose generating a second signal conditioned on the value(s) in the first signal indicating the rate control command will be generated and transmitted in the second signal.

Independent claim 61 recites: . . . *generating a first signal indicating whether the received packet was decoded correctly and indicating whether a rate control command will be issued; and generating a second signal comprising the rate control command when the first signal indicates the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, the cited art fails to disclose this distinctive aspect of the claimed subject matter as recited in independent claim 10. The cited art does not disclose generating a first signal indicating whether a rate control command will be subsequently



issued. The cited art also fails to disclose generating a second signal on the condition that the first signal indicates the rate control command will be issued in the second signal.

Independent claim 62 recites: . . . *receiving a first signal comprising one of a first plurality of values, each value associated with an acknowledgement (ACK) or negative acknowledgement (NAK), and one or more of the values indicating at least whether a rate control command is to be received; and conditionally receiving a second signal comprising one of a second plurality of values corresponding to a respective plurality of rate control commands, wherein the receiving the second signal is conditioned on the value of the first received signal indicating the rate control command is to be received.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, Chung *et al.* does not disclose receiving a second signal on the condition that the value received in the first signal indicates the rate control command will be received in the second signal.

Independent claim 63 recites: . . . *receiving a first signal indicating whether the transmitted packet was acknowledged and whether a rate control command will be issued; and receiving a second signal comprising the rate control command, wherein the receiving the second signal is conditioned on the first signal indicating the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claims 1 and 10, the cited art does not disclose receiving a second signal *conditioned on* the first signal indicating that the rate control command will be issued in the second signal.

Independent claim 64 recites: . . . *generating a first signal indicating whether the received packet was decoded correctly and indicating whether a rate control command will be issued; and generating a second signal comprising the rate control command, wherein the generating the second signal is conditioned on the first signal indicating the rate control command will be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* fails to disclose this distinctive feature of the claimed subject matter as recited in independent claim 64. Chung *et al.* does not disclose generating a first signal indicating whether a rate control command will be issued. Chung *et al.* also fails to disclose generating a second signal *conditioned on* the first signal indicating the rate control command will be issued in the second signal.

Further, claim 2 additionally recites: . . . *the second message comprises the rate control command.* As the cited art fails to disclose a second message that is conditioned on a rate

control indicator in the first message indicating that the rate control command will be issued in a second message, the cited art also fails to disclose a second message comprising the rate control command.

Furthermore, claim 7 additionally recites: . . . *a transmitter for transmitting the first signal and conditionally transmitting the second signal, wherein the transmitting the second signal is conditioned on the value in the first signal indicating at least that the rate control command is to be issued.* For at least reasons similar to that stated herein with regard to independent claim 1, Chung *et al.* does not disclose transmitting the first signal comprising the rate control indicator. Chung *et al.* also fails to disclose transmitting the second signal *conditioned on* the value in the first signal indicating the rate control command will be issued in the second signal.

In view of at least the foregoing, it is readily apparent that Chung *et al.* fails to disclose each and every element of the claimed subject matter as recited in independent claims 1, 6, 10, 19, 20, 21, 22, 23, 40, 41, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63 and 64 (and their respective dependent claims 2-5, 7, 12-18, 46-53, 69-72, 76, 78, and 79). Accordingly, it is respectfully requested that this rejection be withdrawn.

### **III. Rejection of Claims 8, 9, 11, 42-45, 65-68, 73-75, and 77 Under 35 U.S.C. § 103(a)**

Claims 8, 9, 11, 42-45, 65-68, 73-75, and 77 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Chung *et al.* in view of Derryberry *et al.* (U.S. Pub. No. 2006/0128410) (hereinafter “Derryberry *et al.*”). It is respectfully submitted that this rejection should be withdrawn for at least the following reason. Chung *et al.* and Derryberry *et al.*, either alone or in combination, do not disclose, teach, or suggest each element as set forth in the subject claims. Claims 8 and 9 depend (directly or indirectly) from independent claim 6; claim 11 depends from independent claim 10; claims 42-45 depend (directly or indirectly) from independent claim 41; and claims 65-68, 73-75, and 77 depend from independent claim 64. Derryberry *et al.* fails to cure the aforementioned deficiencies of Chung *et al.* with regard to independent claims 6, 10, 41, and 64. Rather, Derryberry *et al.* teaches that a mobile station can operate in autonomous mode or scheduled mode. (See ¶ [0009].) Derryberry *et al.* also teaches that an acknowledgement indication is sent as part of a Supplemental Channel Assignment Message and includes power control bits and data rate grant bits, which are received by the mobile station. (See ¶ [0010].) In

view of at least the foregoing, Chung *et al.* and Derryberry *et al.*, either alone or in combination, fail to disclose, teach, or suggest each and every element of the claimed subject matter as recited in claims 8, 9, 11, 42-45, 65-68, 73-75, and 77. Accordingly, it is respectfully requested that this rejection be withdrawn.

CONCLUSION

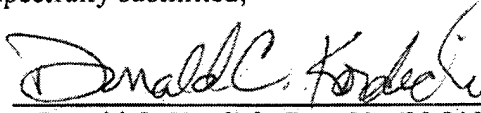
The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 17-0026.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution; the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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